OCEANS NORTH

100 Gloucester St, Suite 502, Ottawa, ON K2P 0A4

613.223.7472

www.oceansnorth.org

Incorporating Coasts and Oceans into Canada's 2021 Nationally Determined Contribution under the Paris Agreement

We can no longer think about the ocean without thinking about its contribution to climate solutions. The ocean supplies half the air we breathe and absorbs half the carbon in the atmosphere. The only way that we can avoid the most catastrophic impacts of a warming climate is to take serious action to protect the oceans. This ambition starts at the national level by including ocean solutions in Canada's forthcoming Nationally Determined Contribution (NDC) it will submit to the United Nations Framework Convention on Climate Change (UNFCCC).

Canada's strengthened climate plan, its commitment to protect 30 per cent of the ocean by 2030, and other key policies under development such the Clean Fuel Regulations, the Blue Economy Strategy, and offshore renewable energy regulations lay the groundwork for the federal government to fully integrate ocean protection and ocean industries with its climate commitments.

Aligning Canada's NDC with that of the United States, including ocean-based climate solutions, is necessary to accelerate global momentum towards achieving the goals of the Paris Agreement and achieving net-zero by 2050. It also helps to ensure that Canada can compete in the changing global economy while lowering the risk of harmful carbon border adjustments.

Ocean Solutions Key to Meeting New Emission Targets

As Canada updates its NDC[1] to reflect its new commitment to reduce greenhouse gas (GHG) emissions by 40-45 per cent below 2005 levels by, it has an opportunity to harness the maritime industry to achieve its climate targets and play a greater role in lowering global emissions. Missing the opportunity to include ocean-based climate solutions in this 5-year ratchet cycle increases the risk of Canada falling further behind[2] other G7 nations, including the United States, the United Kingdom and the European Union, which have all recognized the ocean as a necessary part of climate action and a source of economic growth in the future low-carbon economy.

[1] Canada's first NDC committed to reduce GHG emissions by 30 per cent below 2005 levels by 2030. The only reference to nature-based solutions was that it intended to account for "agriculture, forestry, and other land uses." In 2017, following the release of the Pan-Canadian Framework on Clean Growth and Climate Change, Canada updated its NDC to include additional actions such as "protecting and enhancing carbon sinks including in forests, wetlands and agricultural lands." Coastal ecosystems and the marine environment were not included, nor were emissions reductions from marine industries.

[2] Canada is the only G7 nation whose greenhouse gas emissions have increased since the Paris Agreement.

NDC Alignment with the United States

The updated NDC that was released by the Biden-Harris Administration at the Leader's Summit on Climate outlines specific ocean-based climate solutions it will take to meet its new commitment to cut greenhouse gas emissions by 50 to 52 percent relative to 2005 levels in less than a decade. Specifically, the U.S. promises to protect and restore coastal and marine blue carbon ecosystems; to scale-up offshore renewable energy and reduce emissions from shipping and ports; to increase blue carbon reserves; and to eliminate all emissions from global shipping through domestic action.

Aligning Canada's NDC with that of the United States, including ocean-based climate solutions, is necessary to accelerate global momentum towards achieving the goals of the Paris Agreement. It also ensures that Canada mitigates the risk of harmful carbon border adjustments.

International Commitments Linking the Ocean and Climate

Internationally, Canada has already made many commitments linking climate and oceans that can translate into national climate commitments under the Paris Agreement. These include signing onto the first Because the Ocean declaration in 2015 at COP21 and, a year later, the second Because the Ocean Declaration, which "encourag[es] UNFCCC Parties to consider submitting Nationally Determined Contributions that promote, as appropriate, ambitious climate action in order to minimize the adverse effects of climate change in the ocean and to contribute to its protection and conservation." In addition, Canada joined the Friends of Ocean Action High Level Panel in November 2018, signed the September 2020 Leaders Pledge for Nature, and made a formal international commitment in January 2021 to protect 30 per cent of the ocean by 2030 by joining the High Ambition Coalition.[3]

The 2019 Because the Ocean strategy report, *Ocean for Climate*, was written to assist signatory nations like Canada integrate ocean-based mitigation and adaptation actions their NDCs.[4]

[3] Fisheries and Oceans Canada also joined the Global Ocean Alliance in July 2021 committing to 30 per cent protection by 2030.

[4] The five areas in the report including: encouraging natural carbon sequestration by coastal ecosystems; developing a range of sustainable ocean-based renewable energy solutions; promoting adaptation and resilience solutions for vulnerable populations, ecosystems and ecosystem services threatened by climate change; implementing hybrid solutions supporting both adaptation and mitigation in the fisheries and aquaculture sector; and, solutions in the shipping sector.

Connecting the Dots: Integrating Ocean Solutions into Canada's National Climate Plan

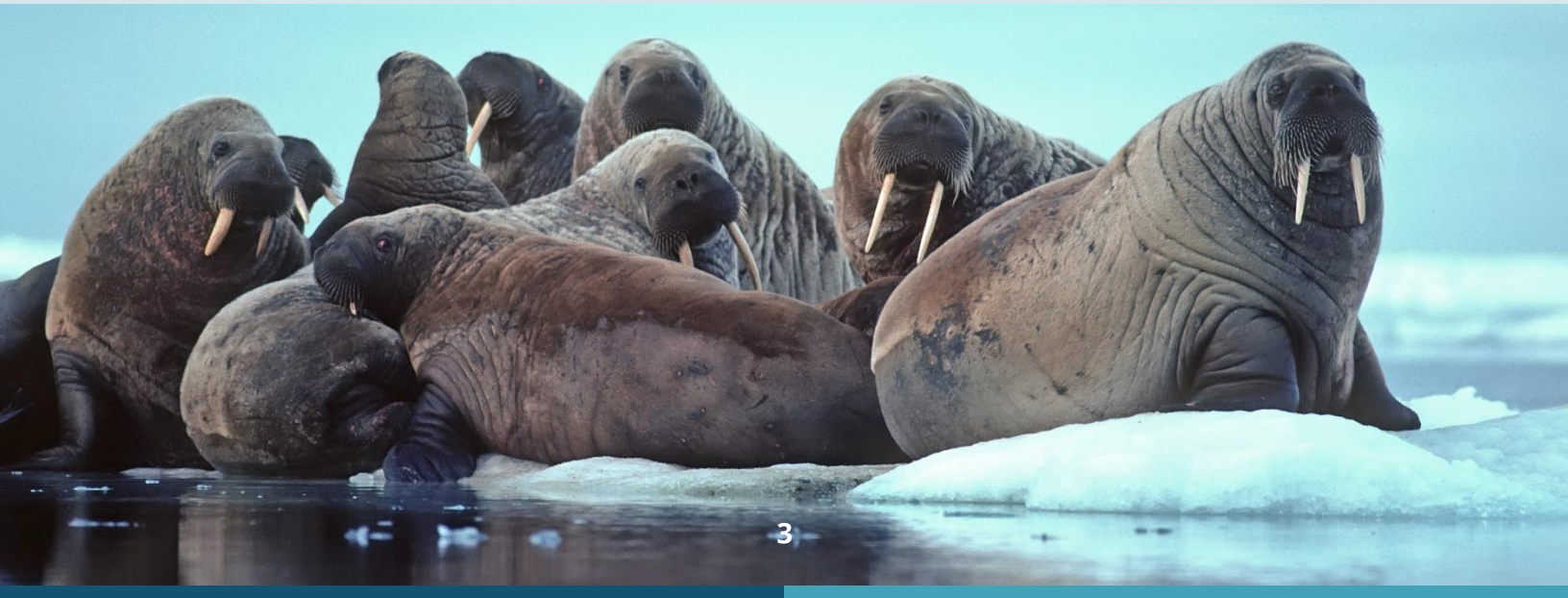
Canada has made numerous commitments to address climate change and protect the natural environment. These include the latest federal budget, the strengthened climate plan: *A Healthy Environment and a Healthy Economy*, the commitment to protect 30 per cent of the ocean by 2030, and other key policies under development such the Clean Fuel Regulations, the Blue Economy Strategy, offshore renewable energy regulations, and a modernized fishing policy. These strategies lay the groundwork for the federal government to connect the dots and fully integrate ocean protection and ocean industries with its climate commitments.

Ocean Solutions in Canada's NDC - Recommended Text

We are providing recommendations to incorporate ocean-based climate actions in Canada's forthcoming NDC. The recommendations build upon new and existing climate plans and follow the guidance of the *Ocean for Climate* report and actions already taken by other G7 nations. As Canada develops strong ocean-climate linkages it must also link climate action and indigenous leadership by ensuring the broad participation of coastal Indigenous communities, Nations and Organizations into all ocean-based climate actions.

We are recommending that Canada include the following statement in its forthcoming NDC:

> *Canada recognizes the close links between ocean and climate and the importance of ocean-based solutions to climate change. As part of its commitment to conserve 30 percent of its freshwater and ocean ecosystems by 2030, Canada will continue to protect and restore critical blue carbon ecosystems through multiple pathways, including area-based protections, Indigenous-led conservation and fisheries management. In keeping with its international leadership on the transition to net-zero emissions by 2050, Canada will also reduce domestic shipping and port emissions, join the push for greater ambition at the International Maritime Organization, and advance marine-based renewable energy.*



The inclusion of ocean-based climate solutions in Canada's national plan will give us the best chance to do our part to reduce global emissions, minimize the adverse effects of climate change in the ocean, and protect our marine ecosystems.

Policy Details

1. Protecting and Restoring Blue Carbon Ecosystems

Marine sediments, particularly nearshore sediments, are one of the most expansive and critical carbon reservoirs on the planet. If left undisturbed, the carbon can remain sequestered on the ocean floor for thousands to millions of years. Lack of protection for blue carbon ecosystems makes them highly vulnerable to human disturbances that can cause the carbon to be released back into the atmosphere, further aggravating climate change impacts. For Canada to fulfill its new ambitious climate target, it must take steps to ensure that coastal and marine blue carbon stores do not change from a carbon sink to a carbon source.

Canada has already implemented policies that protect and restore blue carbon through the Nature Fund, Oceans Protection Plan, the Coastal Restoration Fund and the commitment to protect 25 per cent of our marine and freshwater by 2025 and 30 per cent by 2030.[5] Canada should explicitly link climate to our oceans by incorporating a commitment to protect and restore blue carbon ecosystems in its updated NDCs. Key elements could include:

- Align commitments to protect 25 and 30 per cent of marine and coastal ecosystems with protection and restoration of blue carbon ecosystems, prioritizing carbon-rich ecosystems such as estuarine wetlands, salt marshes and seagrass habitat.
- Integrate Indigenous knowledge systems and marine guardian programs into the protection of blue carbon ecosystems.
- Ensure climate change is integrated into protected-area management and monitoring.
- Develop a comprehensive blue carbon framework and protocol to account for the restoration and protection of blue carbon ecosystems.[6,7]

[5] Canada has also restored habitat protection provisions and enabled fisheries rebuilding for the first time fisheries rebuilding through the adoption of a modernized *Fisheries Act.*

[6] Coastal and marine blue carbon ecosystems are not accounted for in Canada's national emissions inventory report or its NDC in spite of its commitment under the UNFCCC to "develop, periodically update, publish and make … national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol… including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems."

[7] The 2013 Wetlands Supplement extended the content of the 2006 IPCC Guidelines by including updating emission factors for coastal wetlands including mangrove forests, tidal marshes and seagrass meadows. Australia included blue carbon coastal and marine ecosystems in its NDC in accordance with the Wetlands Supplement.

- Work towards the completion of a strong ocean treaty to protect biodiversity and blue carbon ecosystems beyond national jurisdiction.

2. Integration of Climate Targets into Fisheries Management

Commercial fishing is an energy-intensive operation that relies on burning fossil fuels. It has been estimated that in 2011, the global shipping fleet burnt 40 billion litres of fuel and emitted 179 tonnes of CO2e. In addition, destructive fishing practices that damage critical blue carbon ecosystems are also responsible for releasing carbon into the atmosphere. A recent landmark study concluded that bottom trawling is responsible for one gigaton of carbon emissions a year—a higher annual total than pre-pandemic aviation emissions. By proposing strategies to mitigate GHG emissions from fisheries by reducing fuel use, rebuilding fishery stocks and protecting blue carbon ecosystems, Canada can meaningfully include the commercial fishing sector in its effort to achieve its climate targets. Key elements of a fisheries-related NDC commitment should include:

- Integrate climate-based decision making in all fisheries management decisions and quota allocations.
- Freeze the current footprint of bottom trawling, with a particular focus on the Arctic, where trawling has not occurred past 72N.
- Evaluate the opportunity to improve blue carbon sequestration by restoring large-bodied fish and marine mammal populations.
- Work with the fishing industry to identify and facilitate viable pathways for the transition to zero-emission fishing vessels.
- Incentivize fishing vessel and gear improvements to increase fuel efficiency.

3. Reducing Emissions from Shipping and Ports

Reducing domestic shipping and port emissions and advancing the production and uptake of zero-emission fuels and technologies in the maritime sector will help accelerate the broader energy transition and position Canada to play a greater role in reducing global shipping emissions. Investing in green maritime infrastructure such as zero-emission ferries, shore power, and port hydrogen hubs will build the skills and workforce required to position Canada as a modern maritime energy leader while harnessing the sector to achieve its climate goals. Canada should consider the following policy recommendations in support of a commitment to reduce shipping and port emissions in its NDC:

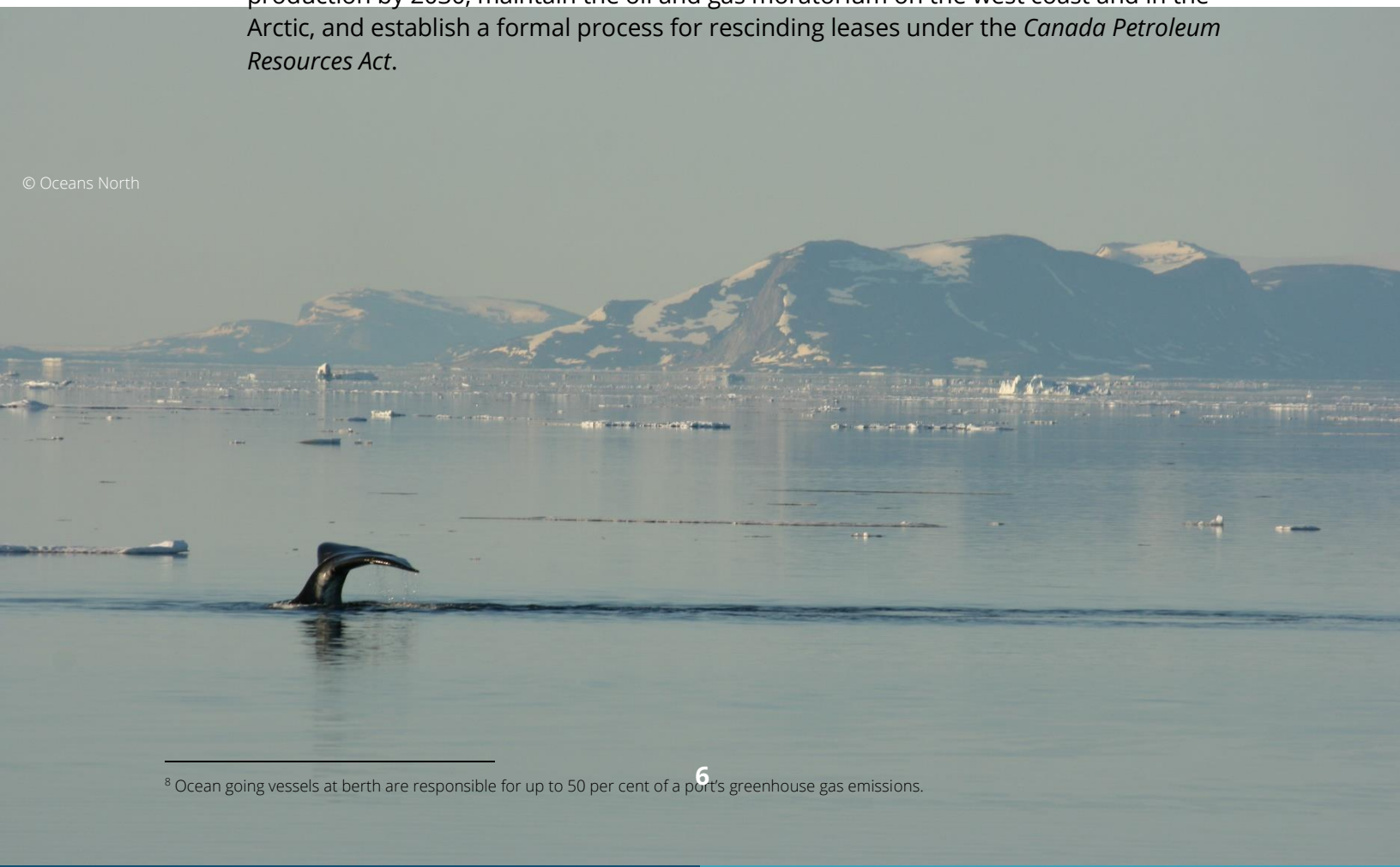
- Decarbonize all passenger ferries by 2030. Public investment in marine-based public transit would spur the development and commercialization of zero-emission fuels and technologies required to set the marine shipping sector on a path to net zero. This commitment also aligns with Canada's commitment to making clean, affordable transit available in every community.
- Invest in a technology competition to build Canada's first hydrogen-powered ferry or tug. Hydrogen fuel cells will play a prominent role in cutting emissions in the shipping sector on the pathway to net-zero emissions by 2050.
- Support the development of port hydrogen hubs and develop ties to international ports to support the development of green shipping corridors and hydrogen export markets.

- Invest in shore power. A commitment to have all marine vessels at berth connected to shore power by 2030 would dramatically lower port emissions while reducing harmful air pollution for communities living near ports.[8]

4. Advancing Renewable Marine-Based Energy

Canada has an abundance of offshore renewable energy resources, including wind, wave, and tidal, that could be utilized to increase the total primary supply of renewable energy. The development of offshore renewables, particularly on the East Coast, could be used to produce low carbon intensity hydrogen to spur the development of port hydrogen hubs and build export capacity. NDC commitments should include:

- Advance marine spatial planning to map ocean-based activities and use area-based management tools to identify opportunities for expanding offshore renewable energy that balance the needs of other ocean users and the sustainability of coastal and marine ecosystems.
- Define generation targets for ocean-based renewable energy that align with efforts to decarbonize marine transport such as the development and deployment of low carbon intensity hydrogen.
- Encourage indigenous participation in the development of marine renewable energy projects.
- Clear the way for renewable energy development by sunsetting offshore oil and gas production by 2030, maintain the oil and gas moratorium on the west coast and in the Arctic, and establish a formal process for rescinding leases under the *Canada Petroleum Resources Act*.



[8] Ocean going vessels at berth are responsible for up to 50 per cent of a port's greenhouse gas emissions.